WaterISAC

The Water Sector's Official Threat & Preparedness Resource

Increasing Safety and Resilience: Understanding the Threat to Water Infrastructure

Water Security Summit
Michigan AWWA Section
June 4, 2013

What We'll Be Covering Today

- Overview of WaterISAC
- Security and emergency response tools and resources to help improve safety and resilience in an all hazards environment
- The current physical and cyber threat environment facing water and wastewater utilities
- Recent security incidents
- What and where to report

Mission

WaterISAC's mission is to provide water and wastewater utilities and the federal, state, and local government agencies responsible for water security with the information and tools needed to prevent, detect, respond to, and recover from all hazards.

Background

- Authorized under the Bioterrorism Act
- Launched in 2002 by utility managers as a non-profit
- Designated the official communications/operations arm of the Water Sector Coordinating Council
- The ***only*** centralized, real-time source for water sector security and emergency management information

Membership

- More than 3,500 Pro members; 8,000 Basic members
  - Water and wastewater utility staff
  - State drinking water, public health, and environmental agencies
  - DHS, EPA and FBI staff
  - Fusion centers and law enforcement personnel
  - State and local security and emergency response agencies
- All applicants for membership are vetted.

Partners

- U.S. Dept. of Homeland Security
- FBI
- U.S. EPA
- FEMA
- Centers for Disease Control
- National Weather Service/NOAA
- U.S. Army Corps of Engineers
- National, State Water Associations
- State Administrators
- Law Enforcement and Intelligence Fusion Centers
- Private Intelligence Organizations
- Other ISACs

Library

Searchable library of more than 2,500 papers, reports, guidance, and best-practice documents including sensitive intelligence products designated FOUO and U.S. Eyes Only.

Problem: Need to improve employee emergency preparedness. . . *on a tight budget.*

Solution: Browsing the WaterISAC Pro library reveals self-directed training programs and courses hosted by water industry associations, DHS, and EPA.

Contaminant Databases

Contaminant databases maintained by private scientific institutions and U.S. EPA

UKWIR

Contaminant Databases

WaterISAC Biological and Chemical Toxin Database

UKWIR Toxicity Datasheets (opens in a new window)

UKWIR Microbiology Datasheets (opens in a new window)

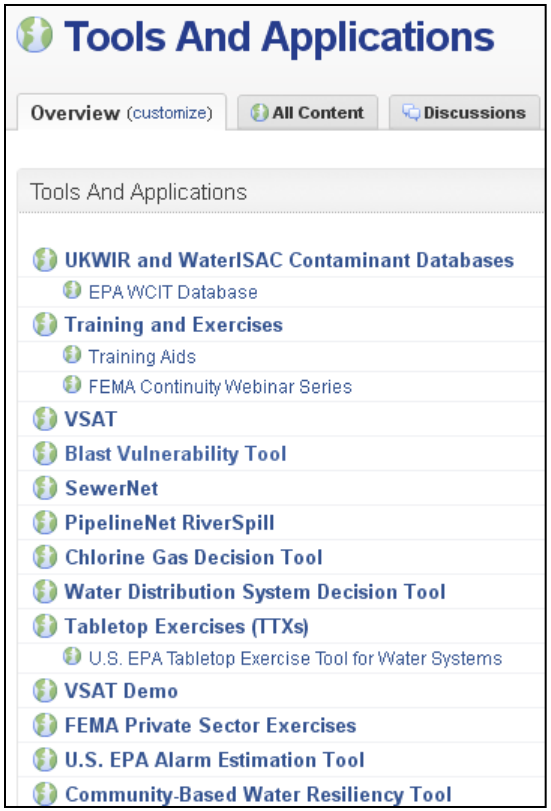
WCIT Database

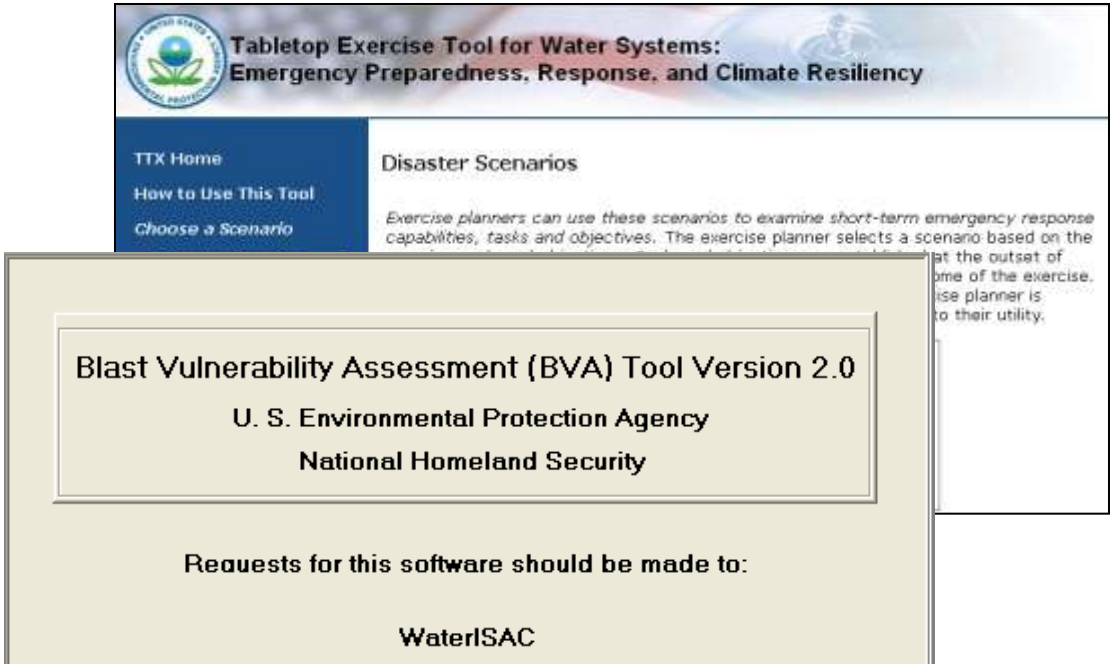
WCIT Database (opens in a new window)

Problem: You are notified of a threat to contaminate water with the poison ricin.

Solution: Use the UK WIR and EPA WCIT databases to review ricin's characteristics, dose-response levels, and treatment options.

Assessment Tools





Problem: Your Emergency Response Plan lacks procedures for a power outage.

Solution: The U.S. EPA's Tabletop Exercise Tool for Water Systems contains multiple natural-hazard scenarios. Run the tool from the WaterISAC portal and gain valuable lessons to improve your emergency preparedness posture.

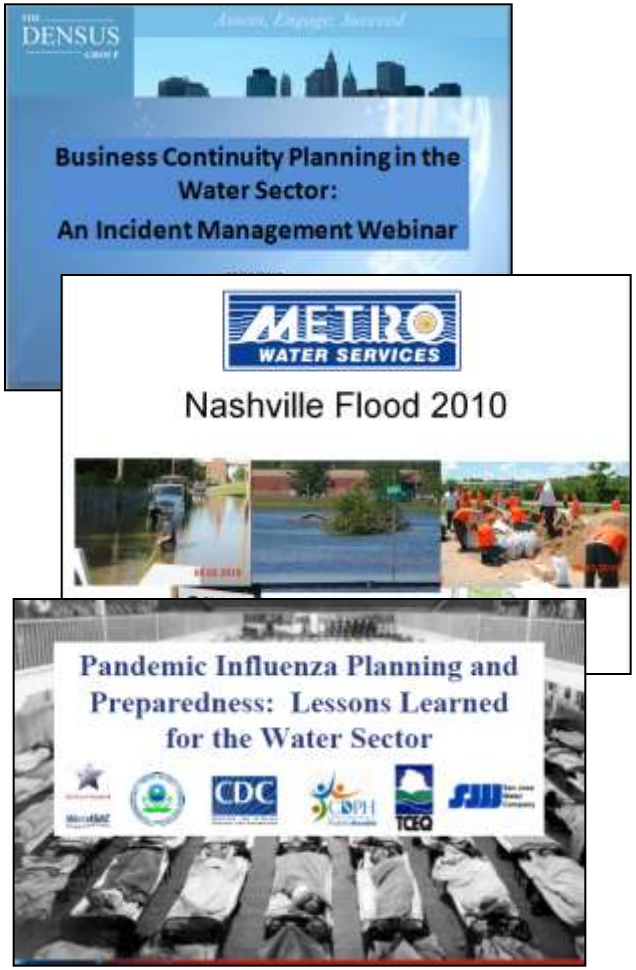
Webcasts & Training

Problem: Staff need NIMS-certification for disaster recovery funding.

Solution: Review NIMS training webinar series to prepare for online examinations

Problem: Convince city manager of risks from malicious insiders

Solution: Listen to the recording of the Mesa, AZ webcast on attempted destruction of wastewater treatment plant



Member-to-Member Dialog

- Online discussions
- Networking
- Content creation

Problem: An employee is exhibiting emotional distress, and you are concerned about where that could lead. You want to know how other utilities have handled such situations.

Solution: You start a discussion thread or identify relevant contacts through the personal profile pages on the WaterISAC secure portal.

24/7 Intelligence Analysts

- **Email**
  analyst@waterisac.org
- **24-Hr Hotline**
  866-h2o-isac

Problem: Suspicious vehicle repeatedly passing your front gate.

Solution: Contact the WaterISAC analyst, who reviews recent incident reports for possible trends and contacts other utilities and/or relevant partners.

Problem: In the aftermath of a disaster, you're having trouble getting the attention of your state EOC and FEMA.

Solution: Call the WaterISAC analyst who uses his contacts to put you and the relevant authorities in touch with each other.

Threat & Incident Alerts

Tsunami Warning/Advisory for North America - Pacific Coastal Areas

WaterISAC Analyst <analyst@waterisac.org>

This message was sent with High importance.

An 8.8 magnitude earthquake in Japan has generated a tsunami that could cause d
California, Oregon, Washington, British Columbia, and Alaska.

Tsunami warnings are in effect for coastal areas in Oregon, central and northern C
westernmost Aleutian Islands. A tsunami warning means that a tsunami with signifi

Problem: A hurricane or tsunami is approaching your location.

Solution: Storm tracking and infrastructure impact assessments sent from WaterISAC enable you to implement your emergency response and business continuity plans, ensuring that your employees are in safe locations and appropriate alternate power sources are standing by.

WaterISAC Threat Analysis

- Potential Attack Scenarios
  - Physical
  - Contamination
  - Cyber
- Potential Perpetrators
  - Terrorists, including homegrown violent extremists and domestic terrorist organizations of varying ideologies
  - Insiders
  - Criminals and vandals
- Natural Disasters, Industrial Accidents

WaterISAC Threat Analysis

- Increased identification of cyber vulnerabilities and attention to industrial control systems by a variety of threat actors.
- Economic conditions continue to make theft, particularly of metal, an attractive target.
- Open source technology resources may inadvertently identify sensitive information
- Malicious insiders with knowledge of critical operations or access to sensitive information are significant risks.
- In *Inspire* magazine, al-Qa'ida in the Arabian Peninsula has urged Westerners to conduct attack in their own countries against a range of targets, including critical infrastructure.
- Attacks by violent, single-issue extremists and active shooters represent a largely unspecific threat

WaterISAC Threat Analysis

- Prepared by WaterISAC's intelligence analyst, based on:
  - Unclassified information discussed in briefings with U.S. Government intelligence analysts, and
  - Incident reports submitted by WaterISAC members and law enforcement agencies.

- In the first half of this year, WaterISAC received reports of the following suspicious activities and incidents at water utilities:
  - Physical Intrusion
  - Sabotage / tampering / vandalism
  - Cyber incidents
  - Theft
  - Suspicious encounters

WaterISAC Threat Analysis

Specific Incidents

- **Insider Attack/Intrusion/Theft**
  The thief circumvented the intrusion alarm system at a pump site by breaking into a HVAC vent, gaining access into the facility without activating any alarms. The suspect stole copper wire and caused the disinfection system to stop running. Police and utility believe an insider was involved due to knowledge of protocols.

- **Verbal Threat/Contamination**
  An individual mentioned to local convenience store employees how easy it would be to cause trouble by contaminating the local water supply, specifically with gasoline. Investigation determined the suspect had been arrested for making threats against other infrastructure in the area, prompting federal charges.

- **Suspicious Encounter/Observations**
  Police and state homeland security investigated an individual who was stopped while flying a remote controlled helicopter with GPS and camera over a dam that provided source water for a local utility.

Incident Reporting

- Timely, detailed incident and suspicious activity reporting is key to our collective security
  - Enables greater and more effective incident notifications
  - Building library for tracking and analysis
  - Design and implementation of protective measures
- Report an incident to WaterISAC
  - www.waterisac.org
  - analyst@waterisac.org
  - 1-866-426-4722 x 3

Interested? Join WaterISAC

New for 2014:
Sign up Several Staff for a Flat Amount

- General Management
- Security
- Emergency Management
- IT
- ICS/SCADA
- Planning
- Water Quality
- Laboratories
- Plant Management
- Public Health
- Legal
- Public Affairs
- Government Affairs
- Sustainability

Type	Users Allowed Per Utility	ANNUAL DUES
State or local governmant agency	5	$499
Association of water or wastewater service providers	5	$499
Federal government	1	$1,000 per person
Government law enforcement, intelligence or emergency management agency	5	Complementary for information sharing partners

People Served: Individuals, not accounts; include number of people served by wholesale clients.	Users per Utility	ANNUAL DUES	
		Only Drinking Water or Only Wastewater	Combined Utility
Less than 20,000	5	$249	$499
20,000 to 49,999	10	$499	$999
50,000 to 99,999	15	$999	$1,999
100,000 to 499,999	20	$1,999	$2,999
500,000 to 999,999	25	$2,999	$4,999
1 million or more	30	$4,999	$6,999

10 YEARS IN 2012

Contact Information

Eric Meyers
Lead Analyst

202-331-0479
866-H2O-ISAC x 3
analyst@waterisac.org
www.waterisac.org

1620 I Street, NW, Suite 500
Washington, DC 20006